MSA-SB-2600 MILITARY SUB-ASSEMBLY
HIGH EFFICIENCY ELECTRIC CONVECTION OVEN

MODEL:
- MSA-SB-2600

COVERING:
- INSTALLATION
- OPERATION
- SERVICE & PARTS

NSN: 9Z 7310-01-519-8399
APL: 43A040025
MF P/N: 98-3600 (No Drain)

NSN: TBD
APL: TBD
MF P/N: 98-3660 (Liner Drain)

INSTALLATION, OPERATION & MAINTENANCE MANUAL

MARKET FORGE INDUSTRIES INC

35 Garvey Street • Everett • MA 02149 • Tel: (617) 387-4100
Fax: (617) 387-4456 • E-Mail: custserv@mfii.com • Website: mfii.com

FORM NO. S-4885 REV. A 5/03 Printed in the U.S.A

TABLE OF CONTENTS

YOUR ENERGY EFFICIENT CONVECTION OVEN

MSA-SB-2600 convection ovens are electrically powered, high capacity ovens featuring high energy efficiency. These ovens are designed to radically cut power consumption, delivering the cooking power of a 16 KW oven from only 11 KW's of energy input. Improvement of energy use is made possible by a carefully designed insulating system which keeps heat inside the oven longer.

A convector fan distributes heat uniformly throughout the oven interior, for fast even roasting and baking.

Like all Market Forge products, MSA-SB2600 ovens are built to the highest standards of workmanship, employing only the finest materials and components Of course, Power Saver II ovens are fully approved by UL, UL Sanitation, and other official testing authorities.

How The Oven Operates

MSA-SB2600 ovens operate by use of two simple controls-a power switch for turning on the fan motor and control circuit, and a thermostat for setting the oven temperature. The oven is otherwise automatic. A thermostat maintains oven temperature by cycling heating elements on and off, with temperature fluctuating no more than 20°F from the setting. Uniform distribution of heat within the oven is assured by continuous operation of a convector fan.

A 60-minute and Constant Heat timer serves as an aid in using the oven, when the timer expires the heating elements shut off. To prevent unnecessary loss of heat when the doors are opened, a interlock switch stops fan operation whenever the right-side door is opened. Should the operator wish to cool the oven, opening just the left- side door will quickly ventilate the oven interior.

OPERATING CONTROLS & INDICATORS

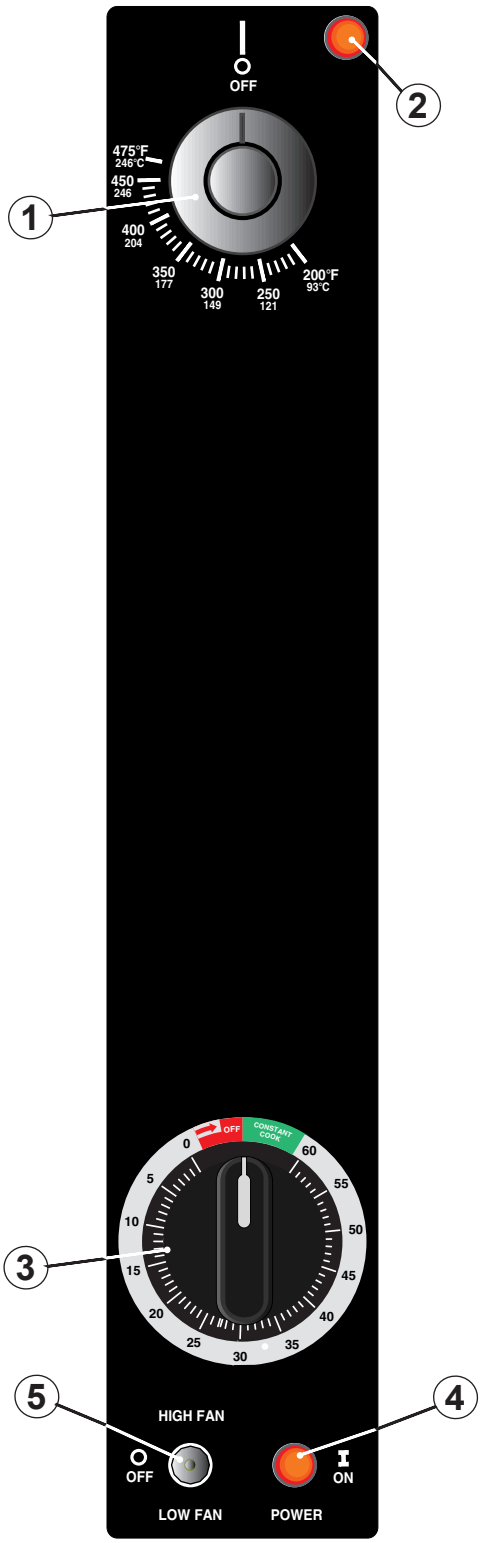


FIG. 1. OPERATING CONTROLS & INDICATORS

The controls required to operate the oven are listed in the following table. together with a short functional description of each. The physical location of each control is shown in FIG.1.

ITEM	DESCRIPTION	FUNCTION
1	Thermostat Control	Regulates oven temperature. Controls heating element operation
2	Thermostat Light	Indicates when the thermostat is calling for heat and the elements are ON
3	Timer/Constant Heat	Electrical timer to aid in time cooking cycles. Controls Oven and Constant Heat mode.
4	Power Light	Indicates power is ON
5	Fan Switch	Three position fan switch. Controls fan speed either HIGH/LOW, or in the middle position the oven is OFF.

1. Check that power is available to the oven

2. Arrange shelf positions according to the item to be cooked.

3. Close doors. Move fan switch to HIGH or LOW. Fan should come on.

4. Set thermostat dial to desired cooking temperature. Element indicator light should come on

5. Allow oven to preheat for about 5-10 minutes. Preheating is complete when indicator light goes out and the buzzer sounds. Do not waste energy by turning the oven on too early.

6. Load oven. The load should be adjacent to the oven, so the doors will be open as short a time as possible.

7. Close doors. Set timer for desired cooking time.

8. Buzzer will sound at end of preset interval. Oven is ready to unload.

9. If oven temperature is to be lowered, set the thermostat to the desired temperature to cool interior. Fan will continue to run with left door open and right door closed. Where indicator light comes on, oven is at lower temperature. Close left door. When light goes off, oven is ready for use.

10. For daily shutdown, place oven thermostat and power switch in OFF position. For extended shut- down, leave doors ajar as well.

CLEANING / PREVENTIVE MAINTENANCE

A good preventive maintenance program in the form of daily cleaning procedures is outlined in the following steps:

1. Remove oven shelves and wash in mild detergent and water. Rinse and dry.
2. Remove left and right hand shelf supports by lifting up and out toward center of oven. Wash, rinse and dry.
3. Remove fan baffle by lifting up and out. Wash, rinse and dry.
4. Wash interior sides, bottom, and top with mild detergent and water. A stainless steel cleaner (not polish) should be used for the interior. Rinse and dry.
5. Replace fan baffle, shelf supports and shelves.
6. Wash both sides of doors, top & bottom trim using a stainless steel cleaner. Rinse and dry.

TROUBLE-SHOOTING GUIDE

The Troubleshooting Guide lists some common difficulties which the operator may encounter in using the oven, together with possible solutions.

PROBLEM **Probable Cause**	**REMEDY**
CONVECTOR FAN FAILS TO OPERATE.	
a. Power to oven is off.	Locate external circuit breaker for power and place in ON position.
b. Power switch off.	Place in ON position.
c. Right oven door open.	Close door.
d. Control circuit breaker off.	Place in ON position.
e. Faulty circuit breaker, door interlock switch, fan motor, or wiring.	Refer to wiring diagram or obtain outside service
INDICATOR LIGHT FAILS TO LIGHT WITH FAN OPERATING, THERMOSTAT SET.	
a. Indicator light burned out.	Replace light. See Service and parts manual for procedure.
b. Electrical failure.	Refer to wiring diagram or Obtain outside service.
FAN OPERATION - NO HEAT.	
a. Thermostat not set.	Set thermostat
b. Faulty contactor, wiring, electrical failure.	Refer to wiring diagram or obtain outside service.

TROUBLE-SHOOTING GUIDE (CONT.)

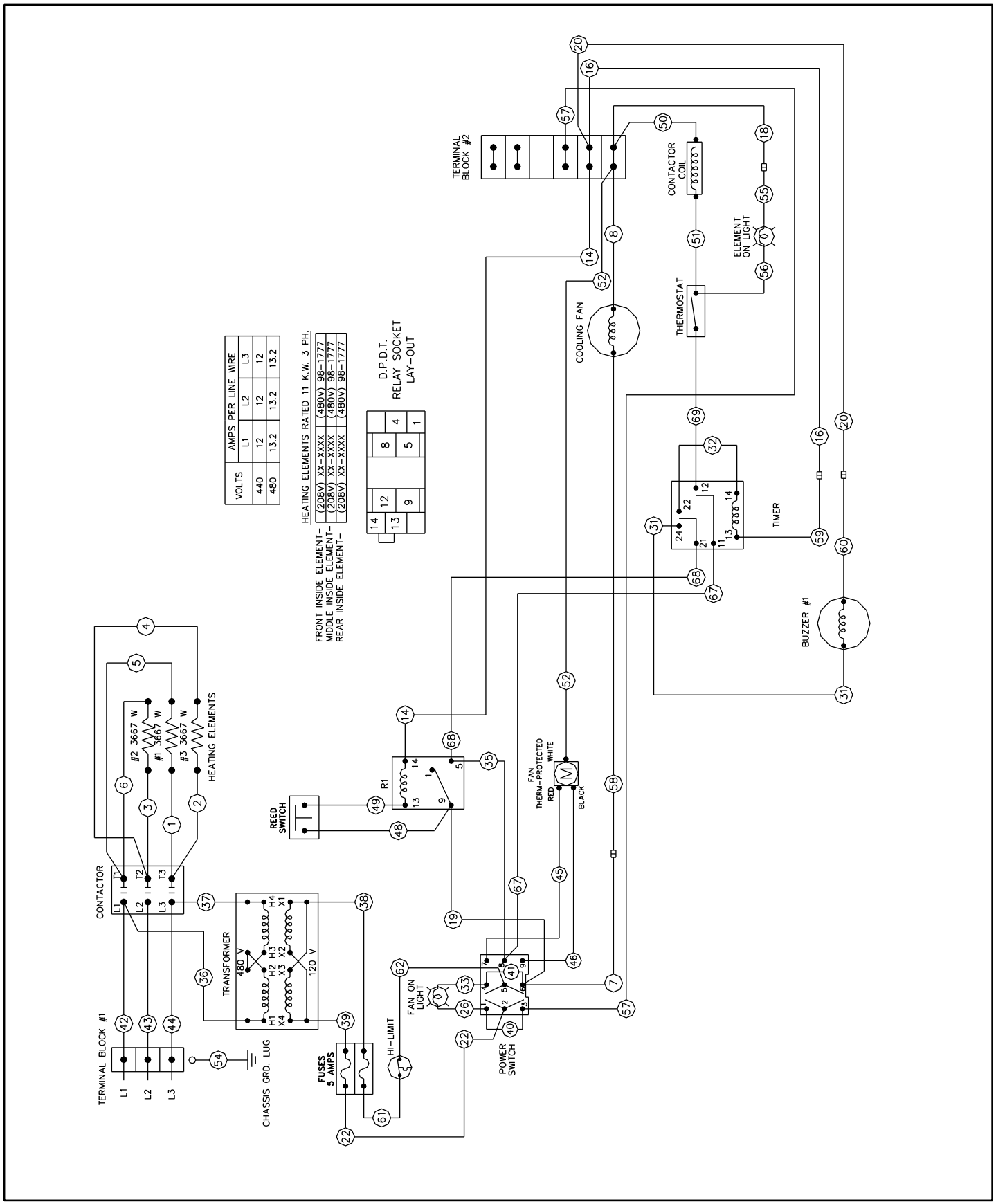


FIG. 2. WIRING DIAGRAM

ILLUSTRATED PARTS LIST

RECOMMENDED SPARE PARTS LIST (P/N 98-3623)

PART NO.	DESCRIPTION	QTY.
10-7371	Power Switch	1
10-5052	Light, Fan Power	1
10-5052	Light, Heating Element	1
08-6308	Reed Switch	1
08-6472	Relay, 120V	1
08-6475	Relay, Socket	1
10-4714	Thermostat, 475 F	1
09-5259	Thermostat, Knob	1
08-6464	Timer	1
08-3826	Timer, Knob	1
10-5944	Contactor	1
09-7248	Motor, 2 Speed	1
08-6351	HI-Limit, Thermostat	1
08-6468	Fuse, 5 Amp	2
09-6475	Transformer, 500 vA	1
10-7395	Buzzer, 120 Volt	1
08-7978	Fan, Cooling	1
98-1717	Element, Heating	1
08-6469	Fuse, Holder	1

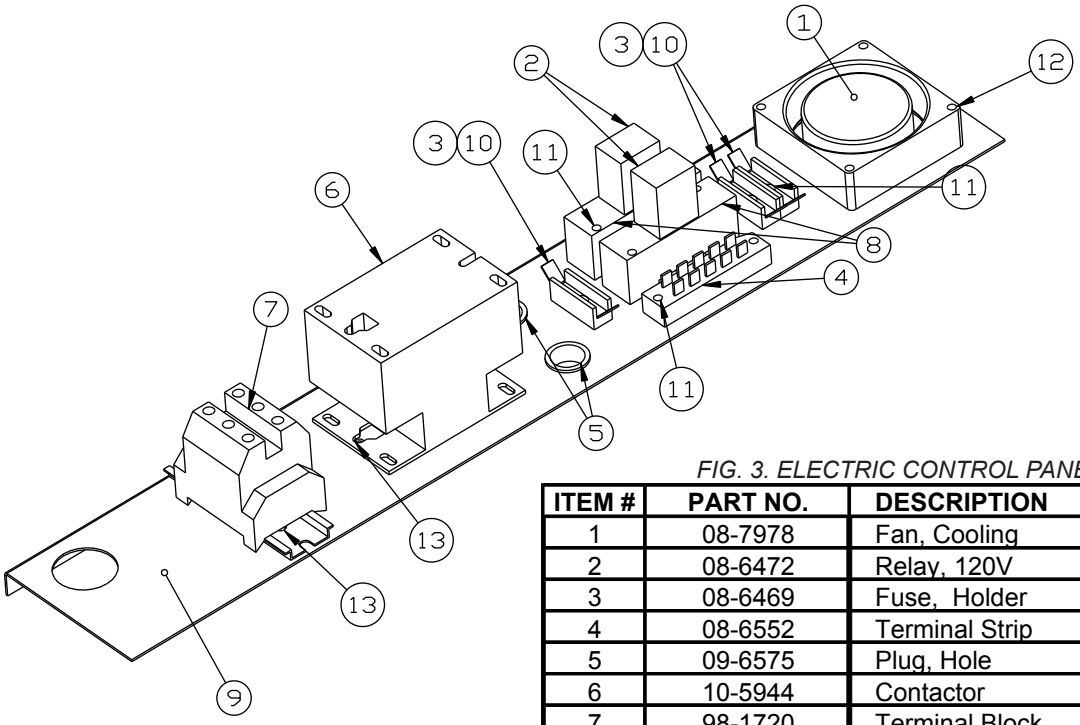


FIG. 3. ELECTRIC CONTROL PANEL WITH PROBE OPTION

ITEM #	PART NO.	DESCRIPTION
1	08-7978	Fan, Cooling
2	08-6472	Relay, 120V
3	08-6469	Fuse, Holder
4	08-6552	Terminal Strip
5	09-6575	Plug, Hole
6	10-5944	Contactor
7	98-1720	Terminal Block
8	08-6475	Base,Relay
9	98-3562	Panel, Electric Controls
10	08-6468	Fuse, 5 Amps
11	10-1720	Screw, #6-32 THD X 1/2" LG, S.S.
12	08-7993	Screw, #6-32 THD X 1 1/2" LG, S.S.
13	10-1761	Screw, #8-32 THD X 3/8" LG, S.S.

ILLUSTRATED PARTS LIST (CONT.)

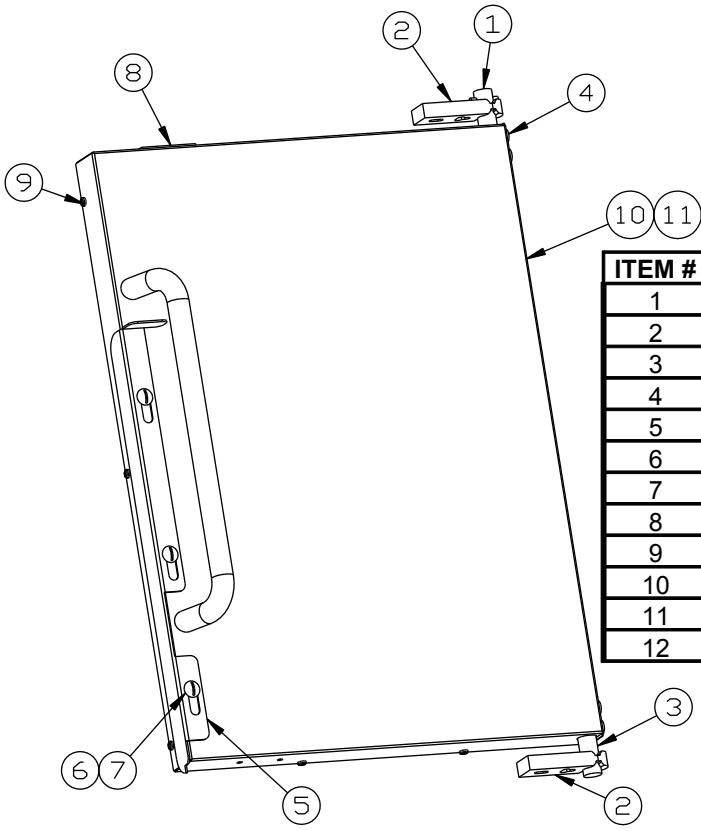


FIG. 4. DOOR ASSEMBLY WITH SLIDE LATCH

ITEM #	PART NO.	DESCRIPTION
1	98-3551	Pin, Door, Top W/Pin
2	98-3552	Bearing, Block, Door Pin
3	99-5602	Pin, Door, Bottom, No Pin
4	09-3427	Hex Head Bolt, 1/4-20 Thd
5	98-3607	Bracket, Slide/Safety Latch
6	08-7990	Screw, 1/4-20 Thd Truss Head 1/2" LG
7	08-7989	Spacer, Door Slide
8	10-5950	Embossed Door Latch
9	10-2146	Screw, #6-32 1/4" Lg, Pan Head
10	98-3546	Inner Door Assy
11	98-3608	Outer Door, Left Side W/O Slide
12	08-7993	Outer Door, Right Side W/Slide

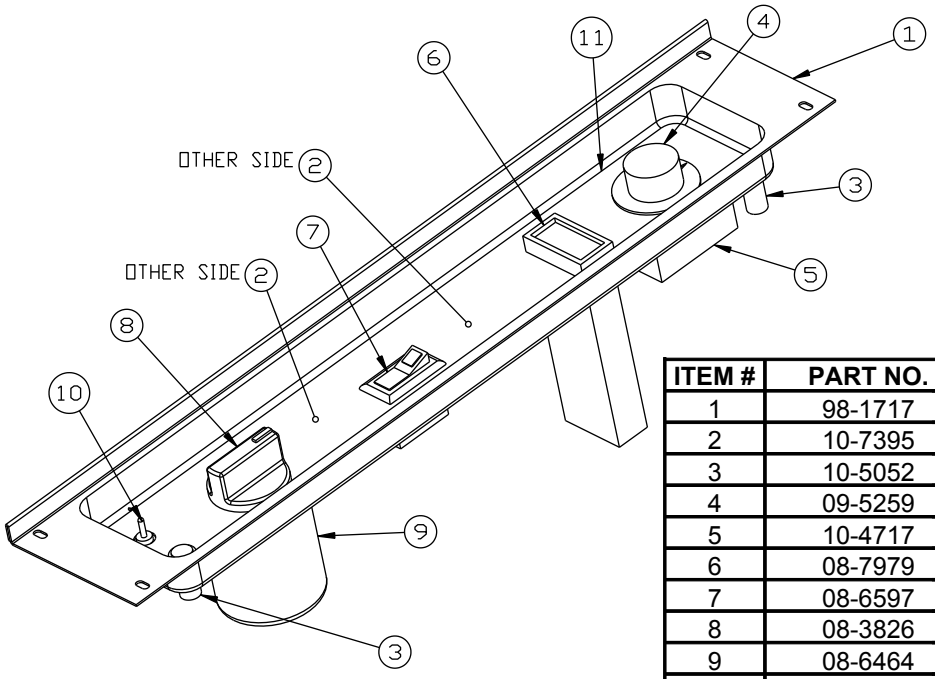


FIG. 5. CONTROL PANEL

ITEM #	PART NO.	DESCRIPTION
1	98-1717	Control Panel, Embossed
2	10-7395	Buzzer
3	10-5052	Light, Power & Fan
4	09-5259	Knob, Thermostat
5	10-4717	Thermostat
6	08-7979	Controller, Meat Probe
7	08-6597	Switch, Mode
8	08-3826	Knob, Timer
9	08-6464	Timer
10	10-7371	Switch, Power
11	98-3543	Lexan, Control Panel, W/O Probe
12	98-1775	Lexan, Control Panel, W/ Probe

ASSEMBLY INSTRUCTIONS

SYSTEMS EQUIPMENT & ENGINEERING TEAM

Assembly Manual
Model: MSA-SB2600, Market Forge Industries
Submarine-hatchable Convection Oven

INTRODUCTION

SUB-ASSEMBLIES

APPENDIX

ASSEMBLY INSTRUCTIONS (CONT.)

1 INTRODUCTION:

1.1 The model MSA-SB2600:

Submarine-Accessible Convection Oven contains 88 total parts for assembly and is designed such that it can be assembled in a submarine's galley with simple tools.

1.2 The total assembly is broken down into 7 sub-assemblies:

- Main Frame Assembly
- Oven Cavity Assembly
- Control Panel Assembly
- Motor/Transformer Assembly
- Inside Oven Cavity Assembly
- Door Assembly
- Outer Skin Assembly

1.3 The estimated time for complete assembly is approximately 6-7 hours for a first timer or 4-5 hours for an experienced assembler.

The oven assembly can be completed with one person, but for a more productive assembly two people are recommended.

1.4 Tools required for assembly:

- Power drill (Cordless drills 12 V or higher)
- Screw driver set
- Screw starter
- Allen wrench set
- Socket Set
- Open wrench Set
- Mallet

FIG. 6. MARKET FORGE OVEN

1.5 Use RTV 106 high temperature silicone rubber adhesive sealant as needed to provide a tight seal to any area that requires it. Also use Loctite 268 on all fasteners that will be permanently fastened.

1 MAIN FRAME ASSEMBLY:

1.1 Parts (12 total):

1	Split base front
2	Split base rear
3	Rear U-channel frame
4	Front frame weld assembly
5	Frame liner support/back channel
6	Channel, frame top left side, front to back
7	Channel, frame top right side, front to back
8	Channel, frame top middle, front to back
9	Channel, motor/transformer support (2)
10	Transformer mounting bracket
11	Junction Box

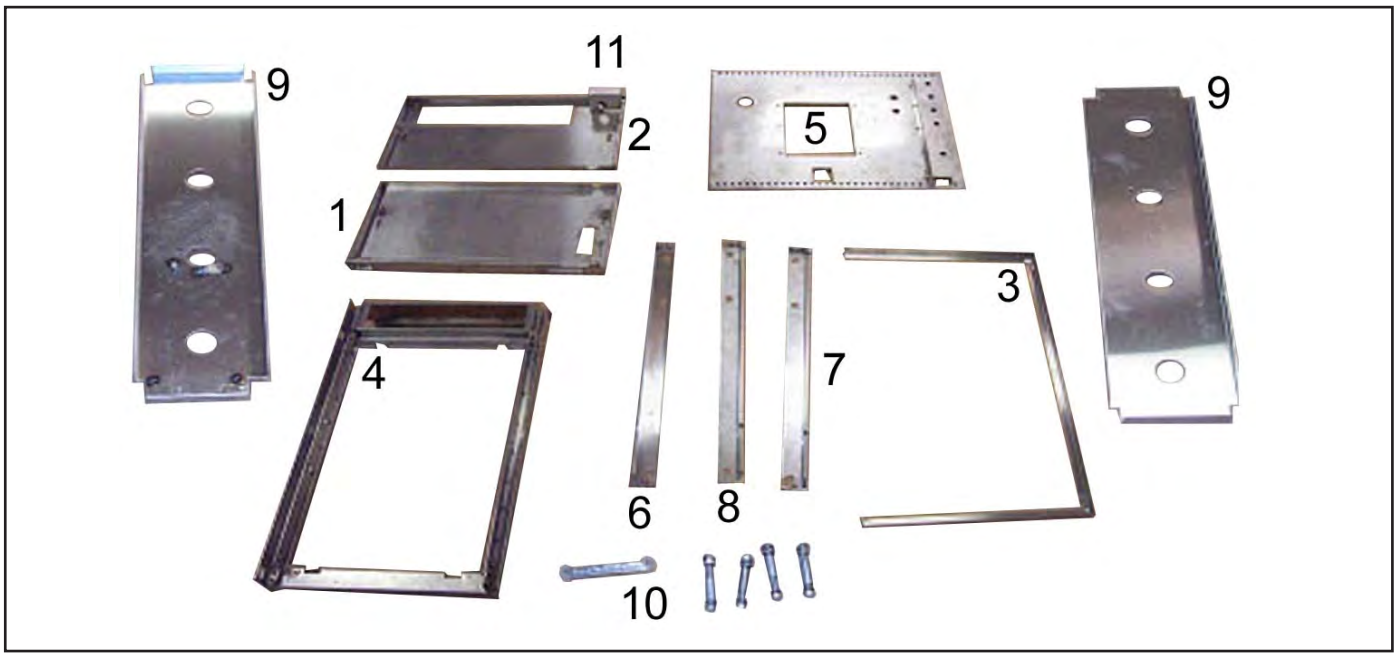


FIG. 7. MAIN FRAME ASSEMBLY

ASSEMBLY INSTRUCTIONS (CONT.)

2.2 Bolt together the split base front (1) to the split base rear (2) using seven ¼-20 hex bolts. Then fasten the Junction Box (11) to the split base rear using nuts.

FIG. 8. SPLIT BASE FRONT/REAR

2.3 Bolt front frame weld assembly (4) to split base front/rear using three ¼-20 hex bolts at the base.

FIG. 9. FRONT FRAME WELD ASSEMBLY

2.4 Bolt Rear U-channel frame (3) to split base front/rear assembly. There are welded bolts in the corner of the split base rear. Slip the rear u- channel over the bolts and use a two nuts to fasten it to the frame.

FIG. 10. REAR U-CHANNEL FRAME

2.5 Install the Frame liner support/back channel (5) with flanges facing to the rear of the oven and vent hole positioned on the left (Viewing from front of oven). This part will align over two welded slots but will NOT be fastened.

FIG. 11. FRAME LINER SUPPORT/BACK CHANNEL

2.6 Bolt channel frame top (7), left side, middle (6), and right side, front to back (8) to the Frame liner support/back channel and Rear U-channel frame. This will require six ¼-20 hex bolts, two for each member.

NOTE: T*he backside needs only nuts since the bolts are welded to each part (Middle channel frame top is not shown in picture).*

FIG. 12. CHANNEL FRAME TOP, LEFT, MIDDLE & RIGHT

2.7 Bolt two motor/transformer supports (9) to Frame liner support/back channel using 5/16”-18, 3-inch bolts with spacers and two 5/16”-18 nuts per spacer. Flanges must face inward towards each other.

FIG. 13. MOTOR/TRANSFORMER SUPPORTS

2.8 Bolt on the transformer-mounting bracket (10) to the bottom of the right (viewing from back end of oven) motor/transformer support (No picture), using two hex head screws.

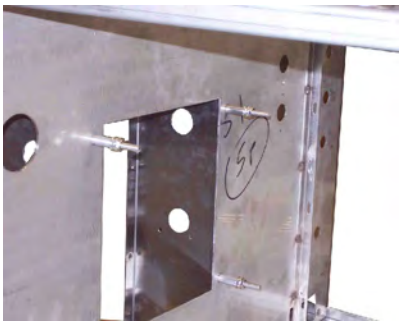


FIG. 14. SPACER WITH (2) NUTS

ASSEMBLY INSTRUCTIONS (CONT.)

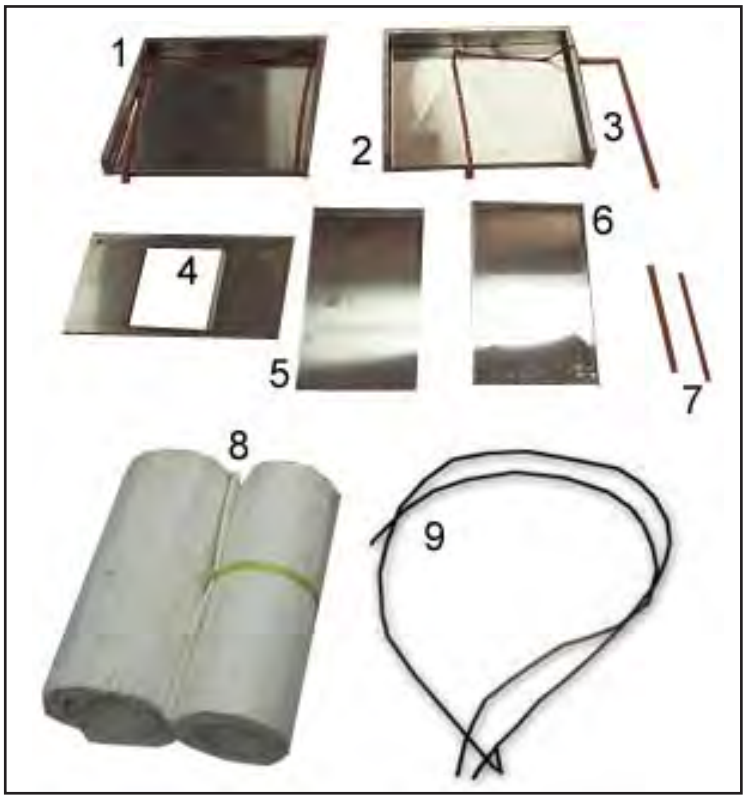


FIG. 15. OVEN CAVITY PARTS

3 OVEN CAVITY ASSEMBLY:

3.1 Parts (15 total):

1	Split liner top
2	Split liner bottom (has two crease lines)
3	U-shaped split liner gasket (2)
4	Split liner rear
5	Split liner left
6	Split liner right (has slots in corner for heating element)
7	Vertical split liner gasket (2)
8	Cavity white insulation (2)
9	nsulation straps with clips (2)
10	Rear cavity insulation (not shown)
11	Top cavity insulation, 1.5² thick (not shown)

3.2 Lay the split liner bottom (2) flat and place the U-shaped split iner gasket (3) around the split liner bottom.

FIG. 16. SPLIT LINER BOTTOM WITH GASKET

3.3 Bolt on loosely the split liner rear (4) to the split liner bottom using ¼-20 hex bolts. Then put the vertical split liner gasket (7) hanging on the top bolt of the left and right side.

FIG. 17. SPLIT LINER REAR

3.4 Bolt the split liner left (5) and split liner right (6) to the split liner bottom and split liner rear.

NOTE: *The split liner right has holes in it for the heating element*.

FIG. 18. SPLIT LINER LEFT & RIGHT

3.5 Then place another U-shaped split liner gasket (3) around the top and finish by bolting the split liner top (1) to the rest of the cavity. Now fasten each and every bolt without moving the gaskets. Then apply silicon sealant to areas of need. As a reminder the front face flanges of the cavity must be flush

FIG. 19. SPLIT LINER LEFT & RIGHT

NOTE: *The corner hole does not have a bolt. Otherwise interfer ence will occur..*

FIG. 20. CORNER

3.6 Install rear cavity insulation (10) mounting over spacer bolts protruding from the frame liner support/back channel.

FIG. 21. REAR CAVITY INSULATION

3.7 Install the whole cavity to the mainframe and secure with four #8-32 S.S hex nuts to the weld studs on the corners of the cavity thru the front frame weld assembly.

FIG. 22. OVEN CAVITY AND MAINFRAME

3.8 Wrap the cavity with two layers of oven cavity insulation (8) starting from the right side of the oven and use two wire straps to fasten them down. Once insulated cut away insulation for heating element to exit from oven cavity.

FIG. 23. OVEN CAVITY & INSULATION

3.9 Then add the top cavity insulation (11) to the top of the cavity. It will not be strapped down.

FIG. 23. TOP CAVITY INSULATION

ASSEMBLY INSTRUCTIONS (CONT.)

4 CONTROL PANEL ASSEMBLY:

4.1 Parts (13 total):

1	Front Control Panel
2	Electric Control Panel
3	Inner Insulation/Electric Panel Divider
4	Conduit Raceway Tubing
5	Conduct Coupling (2)
6	Flexible Conduit 32" (2)
7	Flexible Conduit 12"
8	High Limit Thermostat Mounting Bracket
9	Reed Switch Bracket
10	High Limit Thermostat
11	Inner Insulation Panel Mounting Bracket (Not Shown)

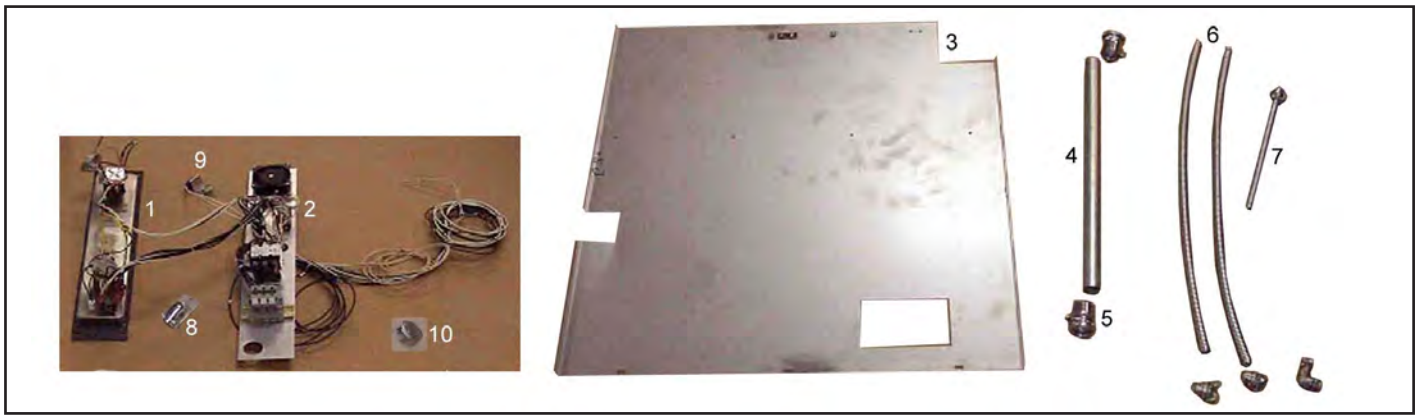


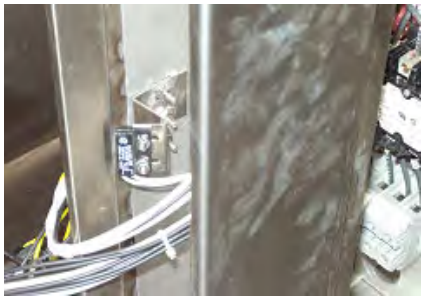
FIG. 24.CONTROL PANEL PARTS

4.2 Bolt on the Inner insulation panel mounting bracket (11) to the inner insulation/electric panel divider (3) and then fasten it to the Frame liner support/back channel using three self-taping screws.Then fasten the nuts on the inner insulation panel mounting bracket where it sleeves over the front frame weld assembly.

FIG. 25. INNER NSULATION PANEL MOUNTING BRACKET

FIG. 26. SLEEVE TO FRONT FRAME WELD ASSEMBLY

4.3 Attach the reed switch bracket (9), which is part of the control panel to the insulation/electric panel divider.



***NOTE:** The position of the reed switch must be such that it is in the most forward position relative to the front of the oven.*

FIG. 27. REED SWITCH BRACKET

4.4 Bolt the green ground wire of the front control panel (1) to the frame as seen in the picture. Use a #10-32 keps nut to fasten to the stud located behind the front frame weld assembly.

FIG. 28. GROUND WIRE

ASSEMBLY INSTRUCTIONS (CONT.)

4.5 Fasten the front control panel to the front frame weld assembly using four #8-32 pan head screws, one in each corner of the control panel face. Then attach the electric control panel (2) to the insulation/electric panel divider using three self-taping screws.

FIG. 29. FRONT CONTROL PANEL & ELECTRIC CONTROL PANEL

4.6 Install 2 conduit couplings (5) on the conduit raceway tubing (4) and install this combination to the electric control panel and junction box.

4.7 Then install the flexible conduit tubing for the high limit thermostat (7), motor (6), and transformer (6). The high limit thermostat has two lead wires that are white and is positioned through the third hole down from the top of the frame liner support/back channel. Do the same for the motor which has three wires numbered 45, 46 and 52.Then again for the transformer, which has four wires numbered 36, 37, 38 and 39 where the transformer conduit is on the bottom of the three.

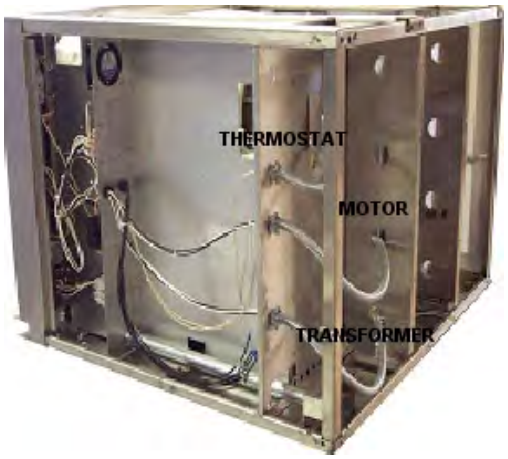


FIG. 30. RACEWAY & FLEXIBLE CONDUIT

***NOTE:** The tubing for the thermostat is 12" while the motor and transformer is 32".*

4.8 Attach the high limit thermostat-mounting bracket (8) to the Frame liner support/back channel using two self-taping screws.

FIG. 31. HIGH LIMIT THERMOSTAT MOUNTING BRACKET

4.9 Connect the high limit thermostat (10) to the two lead wires and then fasten to the inside of the cavity using two #6-32 screws.

FIG. 32. HIGH LIMIT THERMOSTAT

ASSEMBLY INSTRUCTIONS (CONT.)

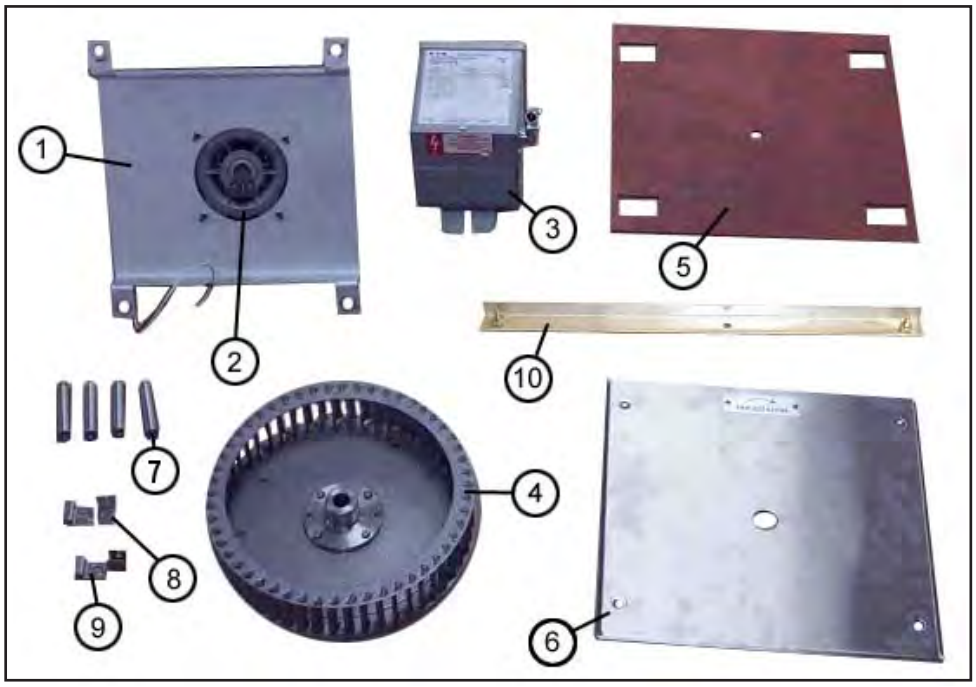


FIG. 33. MOTOR / TRANSFORMER ASSEMBLY

5 MOTOR / TRANSFORMER ASSEMBLY:

5.1 Parts (12 total):

1	Motor Mount Bracket
2	Motor
3	Transformer
4	Fan
5	Motor Cover Plate Gasket
6	Motor Mount Cover
7	Standoff / Baffle With Screw (4)
8	Thermostat Bracket Top
9	Thermostat Bracket Bottom
10	Support Brace Angle

5.2 Attach motor (2) to the motor mount bracket (1). Then install this combination from the inside of the cavity with the motor wires positioned on the top. Do not bolt to cavity at this point.

NOTE: *There should be three spacer nuts between the motor and the motor mount bracket.*

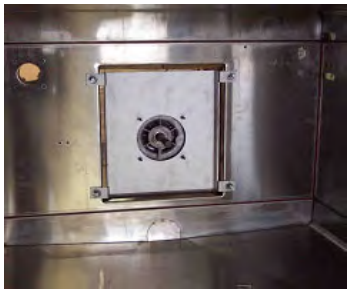


FIG. 34. MOTOR WITH MOTOR MOUNT BRACKET

5.3 Place motor cover plate gasket (5) over the motor mount bracket (placement is important since the gasket is NOT square.

FIG. 35. MOTOR COVER PLATE GASKET

5.4 Install the motor cover (6) over the gasket. Then place the thermostat bracket top (8) over the top right bolt and the thermostat bracket bottom (9) over the bottom right bolt. Fasten all four using hex nuts.

FIG. 36. MOTOR MOUNT COVER

5.5 Install the fan (4) over the motor shaft. Once positioned over the shaft use an allen wrench to fasten the fan to the shaft. Then install four stanoff/baffle's (7) with screw to the four bolts of the motor mount.

NOTE: *Fan front surface and the end of the shaft face should be flush to each other as shown by the arrow.*

FIG. 37. FAN

ASSEMBLY INSTRUCTIONS (CONT.)

5.6 Install the transformer (3) where the bottom will slot into the trans former-mounting bracket. Then fasten down the top of the trans former to the motor/transformer support channel using two ¼"-20 bolts. The transformer should be positioned as closely to the cavity as possible.

FIG. 38. TRANSFORMER

5.7 Have an electrician wire the motor and the transformer following the wiring diagram as in drawing number 98-3542, which is shown in Appendix B, page 29 of this manual.

5.8 Install the support brace angle (10) to the motor/transformer support channels. Tighten in place.

FIG. 39. SUPPORT BRACE ANGLE

6 INSIDE OVEN CAVITY ASSEMBLY:

6.1 Parts (18 total):

1	Heating Element
2	Baffle
3	Vent Tube
4	Element Support Bracket
5	Side Rack Clip (8)
6	Capillary Clip (2-3)
7	Grommet
8	Side Rack (2)
9	Element Gasket

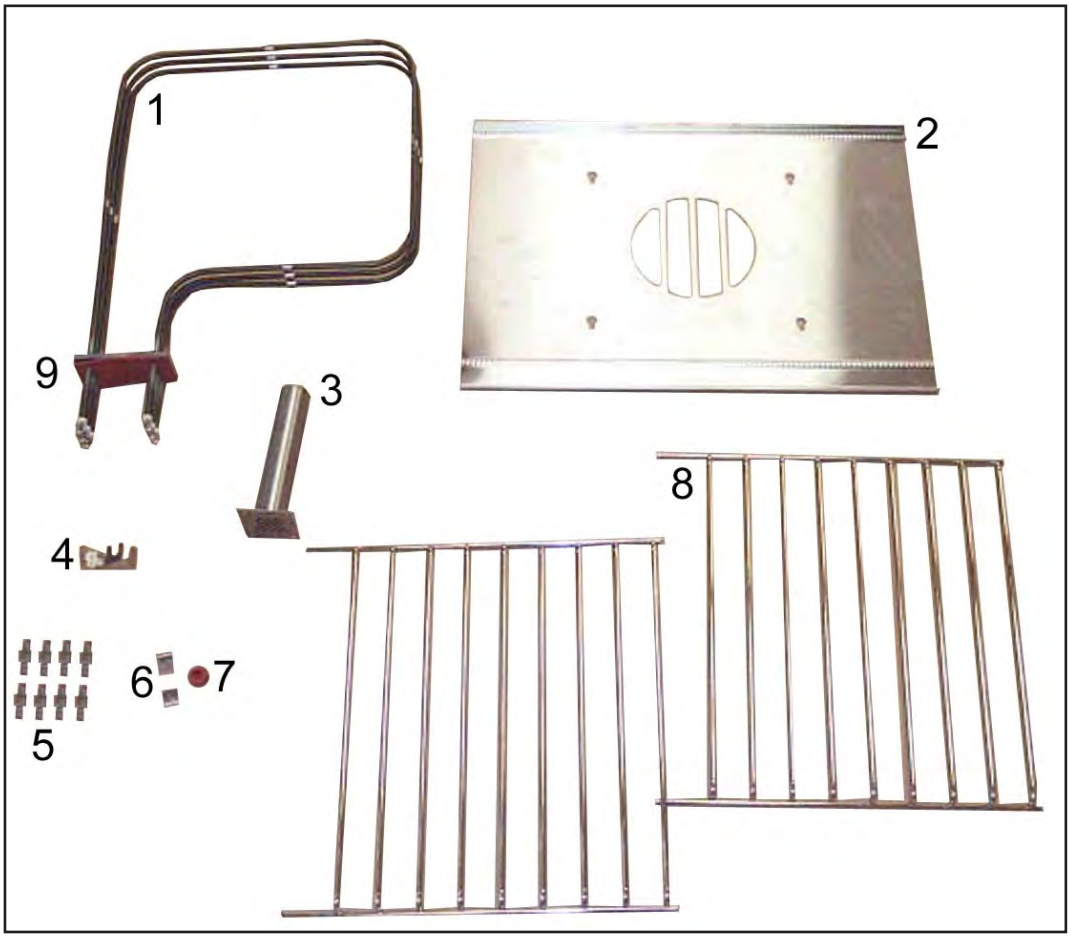


FIG. 40. INSIDE OVEN CAVITY PARTS

ASSEMBLY INSTRUCTIONS (CONT.)

6.2 Install the vent tube (3) using four self-taping screws. Then install the side rack clips (5), four on each side of the oven and use two self-taping screws per clip.

FIG. 41. VENT TUBE & SIDE RACK CLIPS

6.3 Install the element support bracket (4), which will be to the left of the fan, using two self-taping screws.

FIG. 42. ELEMENT SUPPORT BRACKET

6.4 Install the grommet (7) on the right side of the cavity. Then punch a hole through the grommet and CAREFULLY unwind the thermo stat capillary tube located behind the front control panel and feed it through the grommet and into the cavity. Run the capillary tube along the top of the cavity to the back and down through the thermostat brackets. Use capillary clips (6) to fasten the tube using self-taping screws.

FIG. 43. CAPILLARY CLIPS & GROMMET

6.5 Place the element gasket (9) on the heating element (1) and install using four allen set screws. Bolt down the element using #8-32 keps nuts.

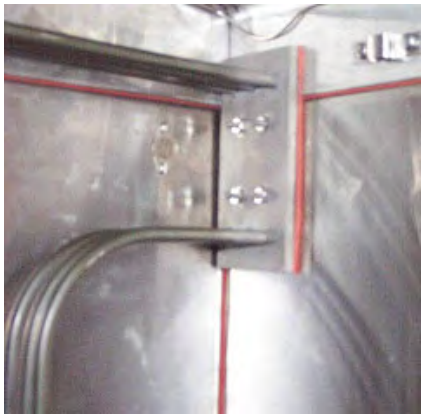


FIG. 44. HEATING ELEMENT WITH GASKET & FASTNERS

6.6 Connect the heating element to the proper cables as indicated in the wiring diagram located in Appendix B of this manual (6 wires).

FIG. 45. HEATING ELEMENT CONNECTION

6.7 Attach the baffle (2) and side racks (8) to the inside of the oven cavity as shown. Use four ¼”-20 shoulder bolts for the baffle.

FIG. 46. BAFFLE & SIDE RACKS

ASSEMBLY INSTRUCTIONS (CONT.)

7 DOOR ASSEMBLY:

7.1 Parts (9 total):

1	Left Door
2	Right Door
3	Door Top Latch (2)
4	Door Lock Latch
5	Left Vertical Liner Gasket (2 pieces)
6	Right Vertical Liner Gasket
7	Horizontal Liner Gasket

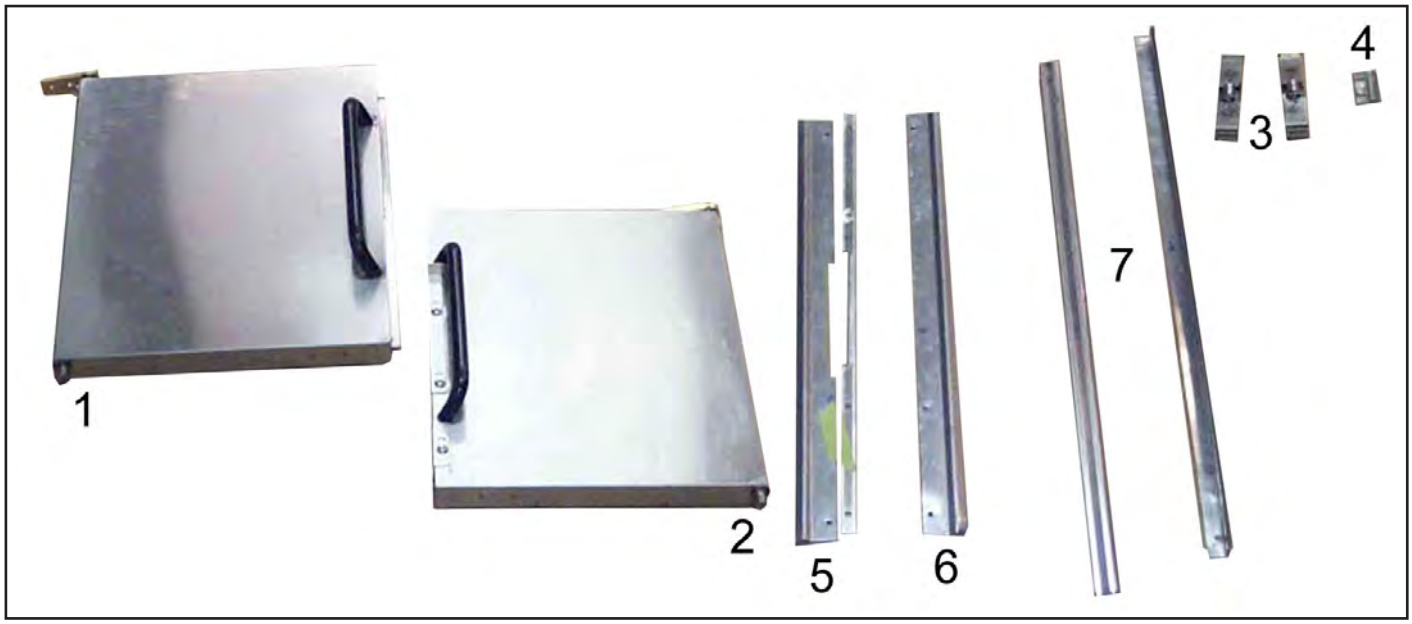


FIG. 47. DOOR ASSEMBLY PARTS

FIG. 48. DOOR LINER GASKETS

7.2 Install horizontal liner gasket (7) on top and bottom of the front frame weld assembly using #8-32 pan head screws.

7.3 Install left and right vertical liner gaskets (5-6) again using #8-32 pan head screws.

7.4 Install the two door top latch (3) in the top-middle of the front frame weld assembly using #8-32 countersunk screws.

7.5 Install left and right door (1-2). Fasten door bearing using #10-32 flat head countersunk screws and nuts.

NOTE: *Adjust doors as necessary to properly align them. may require a few adjustments. This is very important. Door lock atch (4) wll not be installed at this time.*

FIG. 49. DOOR WITH BEARING

ASSEMBLY INSTRUCTIONS (CONT.)

8 OUTER SKIN ASSEMBLY:

8.1 Parts (8 total):

1	Side Frame Skin (2)
2	Bottom U-Cahnnel Cover
3	Top U-Channel Cover
4	Cover Channel Cover (2)
5	Split Top Rear Cover
6	Split Top Front Cover

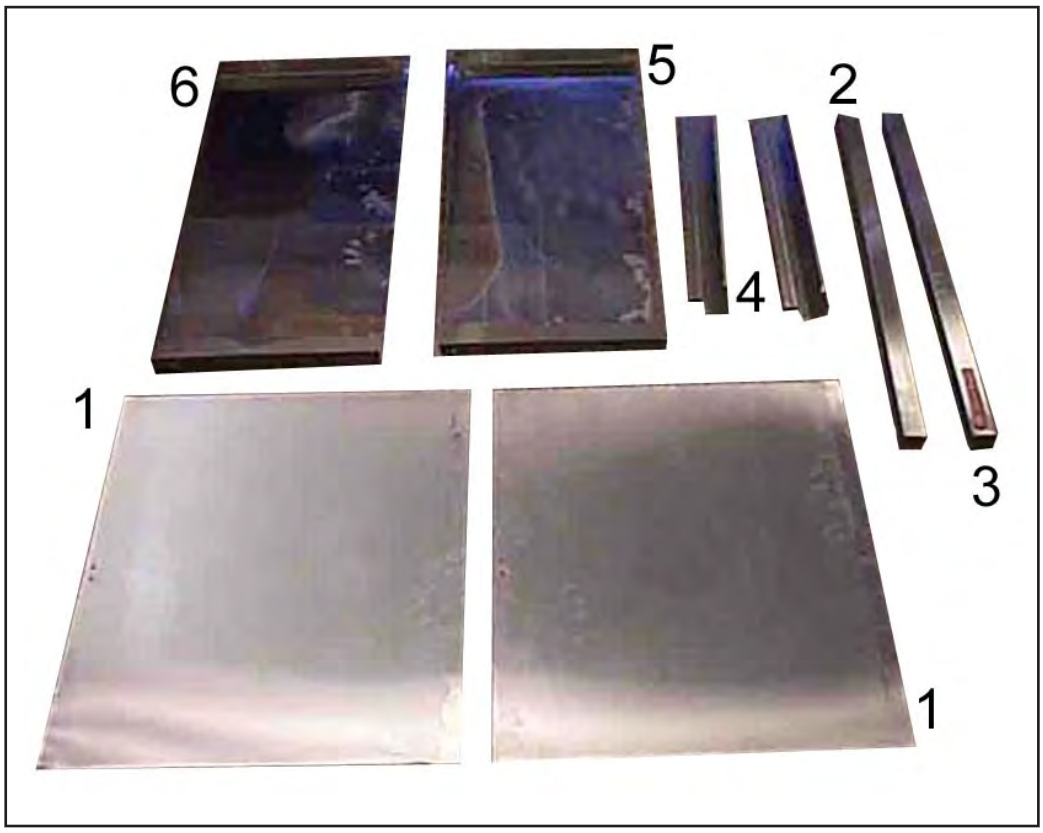


FIG. 50. OUTER SKIN PARTS

8.2 Install the bottom u-channel cover (2) and the top u-channel cover (3) to the front frame weld assembly. No screws or bolts needed. Just pop in the parts.

FIG. 51. TOP & BOTTOM U-CHANNEL COVER

8.3 Install door lock latch using #8-32 quarter pan head screws.

NOTE: *Clode door and adjust as needed.*

FIG. 52. DOOR LOCK LATCH

8.4 Install two, corner channel cover's (4) using two #8-32 pan head screws on the bottom only.

FIG. 53. CORNER CHANNEL COVER

8.5 Have an electrician wire a power supply line through the raceway conduit rates at 480 VAC, 3 Phase.

8.6 Install the side from skin (1) on the right and left side of the oven. Use one #8-32 pan head screw per side.

FIG. 54. SPLIT TOP REAR COVER

8.7 Install the split top cover (5) and screw the rear corner to the corner channel using two #8-32 pan head scewr per corner.

8.8 Lastly install the split top front (6) and fasten to the split rear using seven #8-32 quarter pan head screws.

FIG. 55. SPLIT TOP FRONT COVER

APPENDIX

A. OVEN PERFORMANCE

A.1 Verification Check List

1. Verify that the doors are properly aligned and that there is no interference occuring at room temperature and 400ºF.
2. Verify that all screws and bolts are tight.
3. Verify that the blower fan can operate at high and low speeds.
4. Clean oven with a rag and run oven for 2 hours to burn off oil, clean interior prior to use.
5. Verify that the racks do not bind at 400ºF.

Verify the accuracy of the oven's thermostat at 350ºF by comparing the temperature control setting to the temperature at the center of the over (one thermocouple). The maximum difference is to be no more than ± 5ºF.

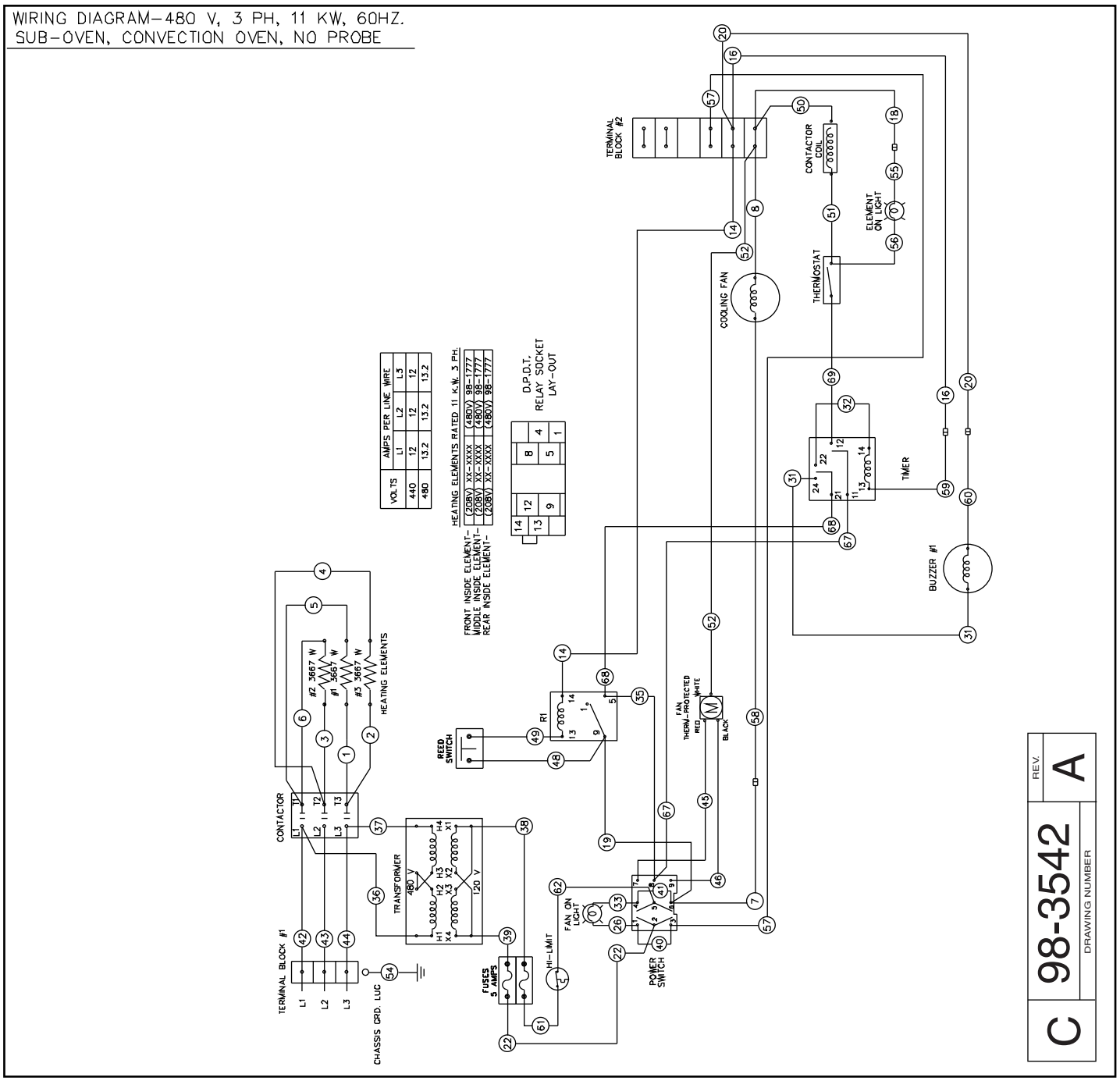


FIG. 56. WIRE DIAGRAM

MODELS: MSA - SB - 2600

SIZE: MSA-SB2600: 35 1/4" D X 36" W X 25 1/4 H
(*896mm front-to-back by 914mm wide by 641mm top-to-bottom*)

DESCRIPTION:
Will be a Market Forge Military Sub-Accessible High Effiiency Electric Convection Oven equipped with COOK & CONSTANT COOK controls. CONSTANT COOK permits operator to preset oven to cook food at a constant temperature for a infinte amount of time.

Exterior will be finished with stainless steel panels, top, rear, sides .Oven liner will be wrapped with a minimum .75" (*19mm*) High-Grade insulation. French type doors will open a full 180° and will be:
Stainless steel with a minimum of .75" (*19mm*) insulation

Oven interior dimensions will be 27 3/8" wide by 20" high by 24 5/8" deep (*695mm wide by 508mm high by 625mm deep*).

Oven interior will be stainless steel with coved corners and a water-proof design. Oven shelves and shelf supports will provide nine shelf positions centered 2" (*51mm*) apart. Shelf stops on oven shelf will prevent tipping within the shelf supports. Five shelves will be furnished as standard. Safety door latch designed to keep doors closed in any pitch and roll environment is included.

Controls will be located on an embossed recessed panel on the right front of oven. Controls will include main power switch, thermostat with indicator light and temperature range of 200°-475°F (*93°-246°C*), mechanical 60-minute and Constant cook timer with audible alarms that sound at end of the preset interval. A 2-speed fan selector switch with HIGH or LOW modes. Controls will also include a high limit cut-off.

Convector fan will turn on automatically when power is on and right door is closed. Fan will turn off automatically when right door is opened. For rapid cooling purposes, it will be possible to operate convector fan with left door open in order to quickly evacuate heated air from oven. Convector fan motor will be rated at 1/4 HP.

MAS-SB-2600 Shown

Oven will be completely serviceable from the front. Back of oven will be completely enclosed and suitable for installation tight against a non-combustible wall.

OPERATION WILL BE BY:
Oven will be rated at 11 KW, and equipped for operation on:

480VAC, 3 Phase

Oven controls will operate on nominal 120 volts AC.

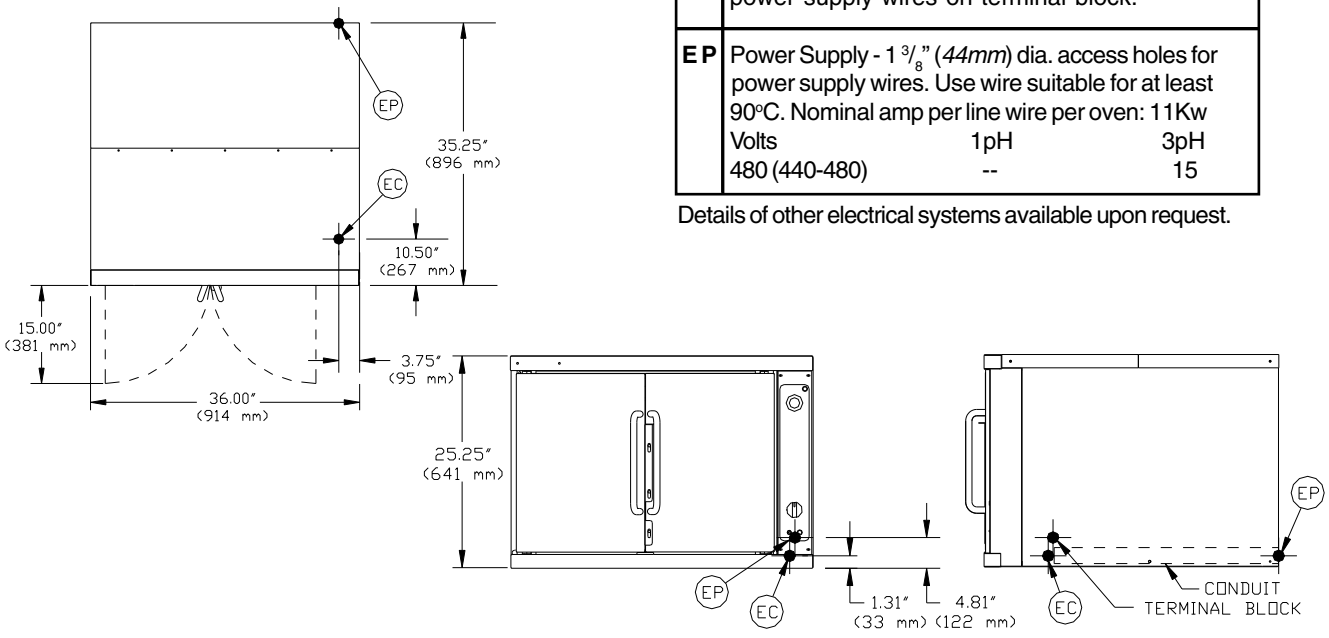
OPTIONAL AT EXTRA COST:
Extra shelves_____quantity.
Meat Probe/Thermometer
1 3/4" Diameter Liner Drain
Legs (4) with Flanged Feet (3/4-10" Thread)

SERVICE CONNECTIONS

Electrically Operated

EC	Electrical Connection - Connection for incoming power supply wires on terminal block.
EP	Power Supply - 1 3/8" (*44mm*) dia. access holes for power supply wires. Use wire suitable for at least 90°C. Nominal amp per line wire per oven: 11Kw Volts 1pH 3pH 480 (440-480) -- 15

Details of other electrical systems available upon request.



APPENDIX

Spare Parts List:

PART NO.	DESCRIPTION	QUANTITY
10-7371	POWER SWITCH	1
10-5052	LIGHT, FAN POWER	1
10-5052	LIGHT, HEATING ELEMENT	1
08-6308	REED,. SWITCH	1
08-6472	RELAY, 120 V	1
10-4714	THERMOSTAT, 475ºF	1
09-5259	THERMOSTAT, KNOB	1
08-6464	TIMER	1
08-3826	TIMER, KNOB	1
10-5944	CONTACTOR	1
09-7248	MOTOR, 2 SPEED	1
08-6351	HI-LIMIT, THERMOSTAT	1
08-6468	FUSE, 5 AMP	2
09-6475	TRANSFORMER, 500 VA	1
10-7395	BUZZER, 120 V	1
08-7978	FAN, COOLING	1
98-1777	ELEMENT, HEATING	1
08-8004	LOCTITE 268	1
08-8003	RTV 106 SILICONE SEALANT	1
08-7999	* HARDWARE KIT (FASTENERS)	1
98-3623	COMPLETE SPARE PARTS KIT	1

** FOR INDIVIDUAL FASTENERS REFER BELOW FOR SPECIFIC PART NUMBERS.*

List Of Fasteners:

PART NO.	DESCRIPTION	LENGTH [INCHES]	THREAD SIZE	QTY.
10-1864	SCREW CAP HEX HEAD	0.5	1/4"-20	77
10-1814	SCREW CAP HEX HEAD	0.75	1/4"-20	7
08-7840	NUT, SERRATED FLANGE	N/A	1/4"-20	73
08-7995	BOLT, HEX HEAD	3	5/16"-18	4
08-7956	NUT, SERRATED FLANGE	N/A	5/16"-18	8
10-2045	SCREW HEX HEAD	0.5	#10-32	2
08-7996	TEK SCREW PHILLIPS PAN HEAD #2	0.5	#10-16	10
10-2146	SCREW, SLOTTED PAN HEAD	0.25	#6-32	26
10-1728	SCREW, PHILLIPS FLAT HEAD C-SUNK	N/A	#8-32	8
08-7994	SCREW, PHILLIPS FLAT HEAD C-SUNK	1	#10-32	8
10-1749	SCREW, MACHINE ROUND HEAD	0.25	#8-32	6
10-1761	SCREW, MACHINE TRUSS HEAD	N/A	#8-32	41
10-2571	NUT, KEPS	N/A	#8-32	20
08-8005	NUT, SERRATED FLANGE	N/A	#10-32	8
08-7992	SOCKET SET SCREW	1	#8-32	4
10-1790	SCREW, CAP HEX HEAD	N/A	1/4"-20	8
10-1939	BOLT, SHOULDER	0.5	1/4"-20	4
08-7991	SCREW, SLOTTED FLAT HEAD C-SUNK	0.5	#8-32	2
08-7990	SCRW, SLOTTED TRUSS HEAD	0.5	1/4"-20	3
08-3822	WASHER, STAINLESS STEEL TYPE B	N/A	1/4"	4